City Engineer

2002 Annual Report of the City Engineer

FRONT DOOR PROJECT COMPLETION

STATE ROAD 46 PROJECT

On November 6 2002, Mayor Fred Armstrong, City Council Members, INDOT officials and Front Door Committee Members, among others cut the ribbon for the final phase of the Front Door Project. Milestone contractors were eager to start construction on the State Road 46 project

Ribbon cutting for the SR 46 project

after a wetter than normal spring. The project made improvements to SR 46 from I-65 to the State Road 11 intersection.

New lights create a boulevard effect for the front door

The improvements included pavement reconstruction, construction of a section of pedestrian trail, installation of lighting, and planting landscaping. The total construction cost for this project was $4.8 million.

Front Door Project Summary

<u>West Commercial Area</u>
Design: MSE Corporation
Construction: L.P. Cavett
Cost: $2.4 Million

<u>I-65 Interchange</u>
Design: Woolpert/J Mueller
Construction: Milestone
Cost: $23 Million

<u>Second Street Bridge</u>
Design: Butler Fairman Seufert
Construction: Milestone
Cost: $10.4 Million

<u>Third Street Bridge Rehab</u>
Design: Butler Fairman Seufert
Construction: Gohmann Asphalt
Cost: $2.4 Million

<u>Parkway</u>
Design: Woolpert
Construction: Milestone
Cost: $4.8 Million

ANNUAL STREET PROGRAM COVERS 20 MILES

This year's overlay, patching, crack sealing, and concrete repair projects covered nearly 20 miles, approximately 8.7 % of the City's 230 miles of streets.

CRACK SEALING PROGRAM

In the month of May, Reece Seal Coating sealed cracks on streets throughout the city. Sealing cracks in city streets increases pavement life allowing a longer time between more intense street maintenance such as overlay. Reece placed 15.5 tons of material to seal cracks on 9.55 miles of City street. The cost for this preventative maintenance was $43,041.

OVERLAY REPAIRS

C.A.S.E. Construction was awarded three separate contracts for street repair. The contracts were for patching, under drain installation, and drainage repairs. By addressing these problems before overlaying the streets, we hope to extend the pavement life and avoid cutting into newly paved streets. The contractor started the repairs on July 22 and completed the work by mid August. The cost of the repairs was $140,891.

300 NORTH OVERLAY

In coordination with the new Marr Road construction this past summer, Road 300 North was overlaid. The overlay covered 300 North from the remaining Marr Road intersection to the new Marr Road intersection. Milestone Contractors were able to complete the work on August 31 at a cost of $11,500.

OVERLAY PROGRAM

This year's overlay program started on September 11. Milestone Contractors L.P. was awarded the project with a low bid of $393,248. As part of the overlay project, Milestone raised

Milestone Contractors overlaid City Streets

manholes, water valve, and detector housings and installed thermoplastic pavement markings. The project was completed in mid October.

HOLLY HILL LANE PHASE I & II

Holly Hill Lane Phase I and II street repairs were completed this summer by C.A.S.E. Construction. C.A.S.E. removed and replaced 991 square yards of concrete on Holly Hill Lane and 173 square yards on Ridgeview Lane. The average cost for phase one of the project was $31.67 per square yard and for phase two was $33.68 per square yard. The project total cost was $40,994.

CURB RAMPS

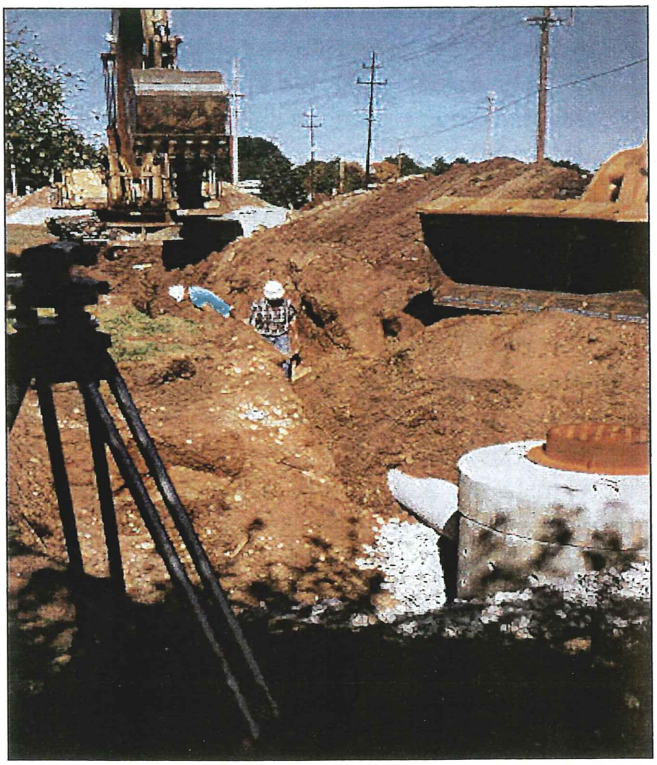
In a continuing effort to bring our walkways into compliance with the Americans with Disabilities Act, the city bid a curb ramp project in February. C.A.S.E. Construction was the low bidder at $90,405. 121 new, compliant ramps were installed along with 108 square yards of sidewalk. The contractor completed this job in less than 90 days.

2600 FEET OF PIPE ADDED TO STORM SEWER

The City awarded contracts totaling $230,812 for miscellaneous drainage repairs and improvements in 2001. Through city contracts, 2603 linear feet of pipe were added to Columbus' storm sewer system. In addition to the new pipe, 12 new inlets were added, and 428 feet of curb was installed. The existing storm sewer system is aging and requires maintenance to avoid catastrophic failure. Several repairs were made this year including 14 inlets, 2 dry wells, 1 manhole, and 55 feet of pipe. An unusually wet spring brought several drainage issues to the surface.

TAYLOR ROAD STORM SEWER

Central Indiana Contracting received a contract to install a new storm sewer along Taylor Road. The storm sewer consisted of 2095 linear feet of pipe, 6 inlets, and 2 manhole structures. 1300 square feet of pavement were disturbed, and 7 new sidewalk ramps were installed. The new storm sewer provides an overflow outlet from Sandy Hook Lake. Seasonal flooding problems at the lake prompted a study of the storm water system in the area. It was concluded that off-site storm water was being routed to the lake. An in-house design was developed to alleviate the problem. Total project cost was $149,391.



Central Indiana Contracting installs storm sewer

23rd STREET IMPROVEMENTS

A storm sewer was added to 23rd street in order to alleviate drainage problems in that area. Milestone contractors installed 350 feet of 12 inch diameter HDPE pipe and 4 new inlets. A pipe was extended out of the last inlet to allow for possible future expansion.

INDIANA STREET CURB

Curb was used as a storm water routing device to direct water more directly to an appropriate conveyance system along Indiana Avenue near Reo Street. C.A.S.E. Construction installed 383 linear feet of roll type curb on the north edge of Indiana Avenue. A cross gutter was also installed across Reo Street to prevent ponding and to provide a defined drainage path for the storm water. The total project cost was $ $12,950.

DEAVER ROAD CULVERTS

In conjunction with roadway work being completed on Deaver Road, the City contracted with Force Construction to remove and replace one culvert and extend another. A corrugated metal culvert under Deaver Road was corroding and showing signs imminent failure. In fact, the flow line of the pipe had rusted completely through in most places. The 12 inch CMP was removed and replaced with a much more corrosive resistant N-12 HDPE pipe. An 18 inch culvert that was still in good working order was extended to accommodate the widening. This project was completed for a cost of $4265.

WALK WORKS 2002

Walk Works 2002 replaced 1960 linear feet of concrete sidewalk across 25 lots. The City also installed 16 curb ramps as part of the *Walk Works* program.

Walk Works, the City's sidewalk replacement program, was established in 1991 to encourage property owners to replace unsafe, deteriorated sidewalks and to build new sidewalks. The program has facilitated the replacement of more that eight miles of sidewalks in the last twelve years. This year the City reimbursed property owners $10 per foot of sidewalk after it was replaced and inspected.

STATE PROJECTS

The Indiana Department of Transportation completed the State Road 46 project this summer *(see page 1)* and continues to work on several other design and construction projects throughout the City.

Currently, First Group Engineering is in the process of addressing public input as part of the US 31 design project. The project is scheduled to begin construction in 2005. The project includes 4 travel lanes with a center turn lane, new concrete curb and gutter, new storm sewer, new sidewalk, interconnected signal equipment, and two new bridges.

State Street is scheduled for improvements between Marr Road and Mapleton Street. The improvements include 4 travel lanes with a center turn lane, sidewalk replacement, realignment of Mapleton/Pence Street, new traffic signals at Marr, Gladstone, and Mapleton, and new left turn lanes at intersections. These improvements are scheduled for contract in 2006.

FORECAST 2003

The City Engineer's Office is already busy planning and preparing projects for next construction season. Plans are ready and rights-of-way are secured for the extension of Taylor Road from Rocky Ford Road to County Road 300 North. This project will connect with the new bridge over Haw Creek that was constructed last summer. Future phases of the project include widening Rocky Ford Road and widening Marr Road.

Drainage projects scheduled for this coming construction season include a storm sewer to provide an overflow outlet for the detention ponds at Columbus East High School, Phase II of the Taylor Road storm sewer that will extend service north from Lakeside drive to Waycross drive, and a drainage pipe to be placed in the Flintwood swale to improve drainage between 28th and 25th Streets.

Wayfinding signs are expected to be installed in 2003. The new signs will help guide visitors to schools, parks, the Visitors Center and other popular locations.

City Engineering Staff

Steve Ruble	City Engineer
Steve Rucker	Assistant City Engineer
Randy Sims	Senior Engineering Technician
Rebecca Douglas	Technician
Shawn Plummer	Technician
Patricia Whitson	Technician

NPDES PERMIT

In December, the Board of Public Works and Safety signed a contract with DLZ Engineers to provide professional engineering services to assist the City in obtaining a National Pollutant Discharge Elimination System (NPDES) phase II permit.

"Mandated by Congress under the Clean Water Act, the NPDES Storm Water Program is a comprehensive two-phased national program for addressing the non-agricultural sources of storm water discharges which adversely affect the quality of our nation's waters. The Program uses the National Pollutant Discharge Elimination System (NPDES) permitting mechanism to require the implementation of controls designed to prevent harmful pollutants from being washed by storm water runoff into local water bodies" (US EPA website).

Columbus is designated as a regulated entity under phase II of the NPDES permit program. Columbus meets the two following criteria:

(1) Any entity located on a Census Bureau urbanized area map is automatically designated (based on 2000 Census data mapping)

(2) Any entity whose population (based on 2000 Census data) is greater than or equal to 10,000 is automatically designated (regardless of percentages of combined sewer systems)

"The regulated entities must obtain coverage under an NPDES storm water permit and implement storm water pollution prevention plans (SWPPPs) or storm water management programs (both using best management practices (BMPs)) that effectively reduce or prevent the discharge of pollutants into receiving waters" (US EPA website).

The impacts of this permit requirement are yet to be determined, but as the City progresses through the permit process those impacts will become more defined. It is very likely that the City's ordinances regarding storm water will require extensive modification to address the requirements of the permit.

COLUMBUS MPO

In May, the City received a letter from the Federal Highway Administration stating that the Columbus area was designated an urbanized area and needs to form a Metroplitan Planning Organization. More information can be obtained from the Planning Department Annual Report.

Acronyms associated with a MPO

ADA – Americans with Disabilities Act of 1990
CFR – Code of Federal Regulations
CTPP – Census Transportation Planning Package
EIS – Environmental Impact Statement
EPA – Environmental Protection Agency
FRA – Federal Railroad Administration
FTA – Federal Transit Administration
INDOT – Indiana Department of Transportation
ISTEA – Intermodal Surface Transportation Efficiency Act
MPO – Metropolitan Planning Organization
STP – Surface Transportation Program
TEA -21 – Transportation Equity Act for the 21st Century
TIP – Transportation Improvement Plan
TMA – Transportation Management Area
TP – Transportation Plan
UPWP – Unified Planning Work Program
U.S.C. – United States Code